New research problems and agendas in learning, media and technology

New research problems and agendas in learning, media and technology: the editors' wishlist

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Editing a journal is both a practical undertaking and a potentially agenda-setting one. As editors, our practical responsibility is to help manage an important stage in the research publication process for authors. But we also hope the journal contributes to wider debates about educational research in the field of learning, media and technology. In recent years the editorial agenda of the journal has emphasized our commitment to critical research that surfaces new problems for interrogation. Much contemporary research on educational technologies and media tends to be fixated on solving problems and offering evidence of 'what works'. One of the most important aims of educational research, however, is to identify problems:

> Educational research that operates in a problem-posing rather than a problem-solving mode is … itself a form of education as it tries to change mindsets and common perceptions, tries to expose hidden assumptions, and tries to engage in ongoing conversations about what is valuable and worthwhile in education and society more generally … in order to show that perhaps there's something else that should be asked for or aimed at. (Biesta, Filippakou, Wainwright & Aldridge, 2019, 3)

As editors, our ambition is for *Learning, Media and Technology* to be a site for problem-posing research in our own field of education research. This year, Ben Williamson joined as a new co-editor to help us continue developing the journal as the leading publication for critical research in educational technologies and media.

As we begin looking towards the 2020s—and, more practically, beginning the editing process for papers and special issues that will take the journal into the new decade—we thought now was a good time to outline what we believe to be some of the most pressing issues in our field. Educational technology has moved from a niche concern to one of the most significant aspects of contemporary education and learning. This is not because 'what works' has been proven or because research has now 'solved' intractable problems previously holding it back. Rather, we see educational media and technologies as raising new problems that research has yet to grapple with fully. We also believe there are problems we have not yet identified, and we invite authors to help *cause* problems in the field by challenging 'taken for granted assumptions about what is going on and what should be going on' (Biesta

et al, 2019, 1). Below is our 'wishlist' for topics and approaches we hope to see feature in the journal over the next few years.

Digital education policy. Education technology and education policy have always had a strange relationship, with edtech companies and advocates often concerned by the lack of government interest. Recently we have seen a surge of initiatives, lobbying activities and policy influencing activities from the edtech sector. In the UK, the 2019 Department for Education 'EdTech Strategy' signalled a renewed commitment to educational technologies by government ministers, with a particular emphasis on stimulating the edtech business sector. In addition, many new edtech startups have begun to exploit the business model of the social media platform to cascade out to teachers and students without the impediment of education policy. And because edtech can produce 'data', it has become increasingly policy-relevant amid demands for 'evidence' of 'what works' (Jarke & Breiter 2019). These shifting relationships between education policy and edtech raise significant new research questions. How is policy being adjusted around the edtech industry? What are the chains of influence that lead to new edtech strategies and other government commitments to the sector? To what extent, and how, are edtech companies setting shadow education policy agendas, such as by cultivating 'network effects' of users at international scales? What data are edtech services producing, and how do these contribute to (or challenge) policy agendas? These and other questions highlight the urgency of research interrogating the complex nexus of policy, edtech and business.

'Learning science' in edtech. Most educational technologies and media are based on an underlying theory of learning. The 'science of learning' or 'learning science' has become increasingly popular, and is used by education technology companies and researchers to justify their products or approaches. In the sociology of science, or science and technology studies (STS), the claims of scientists are the basis for detailed analysis. How are scientific 'facts' produced? What research agendas led to them? Where did the funding come from? What disagreements occurred in the process of knowledge production, and how were these resolved, with what consequences? Learning science should be subject to similarly sceptical studies, particularly as education technology producers increasingly turn to contested scientific ideas and claims from fields such as positive psychology, cognitive science, and neuroscience. Such research would not set out to simply critique the science of learning, but to interrogate the social factors involved in its production and the making of its knowledge claims. Indeed, more and more educational research in the science of learning is conducted digitally. The digital instruments and methods of the learning sciences ought to be the focus of concerted attention for researchers interested in the connections between learning, media and technology—they are introducing new forms of computational educational

research and knowledge production into the field, changing the very ways we might understand learning itself.

Politics and economics of edtech. The last few years has seen an extraordinary outpouring of criticism of the technology sector in general and of Silicon Valley businesses in particular. Influential books such as Nick Srnicek's *Platform Capitalism* (2016) and Shoshanna Zuboff's *Surveillance Capitalism* (2019) have laid bare the new political economy emerging from the imbrications of technology, business and politics. In Zuboff's terms, human lives, personalities, bodies and emotions have all become subject to ever-proliferating techniques of data 'rendition' by organizations that aim to profile users, target advertising, 'personalize' services, and even 'micro-target' political messaging, all while amassing commercial profit and mobilizing corporate lobbying power to bend laws and regulations to their own interests. The power of big platform companies and business entrepreneurs has moved to education with force in recent years (Means 2018). What problems does this raise? How productive is it to analyse the 'personalization' agenda in education through the concepts of platform capitalism and surveillance capitalism? Are we witnessing the emergence of new kinds of 'education rendition' as data are extracted from learning experiences, environments, even from learners' bodies? Indeed, what problems should education researchers be identifying and pursuing that can help flesh out wider understandings of the new political economy of the digitized and datafied 21st century? After all, digital platforms and surveillance rely on technologies of machine learning and artificial intelligence—learning and intelligence have been key sites of debate in education research since it first emerged as a discipline, and as educationalists we should be contributing our expertise to debates about these new forms of 'nonconscious cognition' (Hayles 2017). We should also trouble oversimplified accounts suggesting that education needs to adapt to AI and automation in order to 'robot-proof' students for future jobs. Clearly automation is a major challenge for education systems, but it should also be understood as deeply contested rather than inevitable.

Edtech pushback and ethics dilemmas. As the connections between educational technologies and political economy have begun to resolve into view, we have also seen the stirrings of remarkable public pushback against edtech. The mainstream news press has begun to cover edtech stories, such as student walkouts against personalized learning platforms, parental anxieties about classroom behaviour apps, or the 'takeover' of public education by Silicon Valley businesses. This edtech pushback by both public groups and the media is a fascinating space for original research in its own right. Anti-edtech activist bloggers are now doing education research for themselves outside of the normal disciplinary enclosures, circulating their findings online, contributing to public consultations, and putting pressure on policymakers. There are opportunities here to study these activities, or

perhaps to find new ways of doing publicly impactful research through collaboration. At the same time, the ethical stakes of education technologies that process sensitive student data and personal information have never been so acute. Issues such as the spread of surveillance technologies (Manolev, Sullivan & Slee 2019) and the difficulties with securing student anonymity (Bayne et al 2019) are raising fresh ethical, legal and regulatory challenges that various groups, from activists to policymakers, are seeking to address. This is reflected, for example, in high-profile ethics-focused initiatives such as the Age-Appropriate Design Code and Online Harms White Paper in the UK. These frameworks will set the ethical standards for collecting data about young people. But from an explicitly educational perspective, how adequate are these and other emerging ethics frameworks? Who gets to decide what's ethical? Is 'ethics' a distraction from questions of legality, or of what's socially valuable, worthwhile, and just? Even worse, are current ethics frameworks just a case of 'ethics-washing', designed to 'give the impression that an issue is being taken seriously and meaningful action is occurring, when the real ambition is to avoid formal regulation and legal mechanisms'? (Kitchin 2019).

Post human and sociomaterial perspectives. Recently, reflecting on a conference on digital literacies, a delegate commented that: "…the post-humanistic and the sociomaterial perspectives seemed to dominate… in a way that made the child and the teacher 'disappear'." This is an interesting perspective on recent, emergent theoretical trends in new literacy studies. Post-human constructs should not mean that humans are silenced or absented from the account of the various phenomena around material (and immaterial) technological actors. We would be very interested in receiving articles which attempt to factor socio-materialist theory into research which is inclusive, and which finds new ways of representing the networks encompassing human beings and things in the context of learning.

Media Literacy / Digital Literacy. Many education systems worldwide are attempting to incorporate a range of different, but interconnected educational constructs responding to the digital age into their curricular designs. Some of these are versions of 'Media Studies', renewed for the digital age, some of them arise from decades of advocacy in the field of 'Media Literacy', some of them from a realisation that 'Digital Literacy' or 'Information Literacy' must be about more than an operational, essentialist set of life skills. These initiatives attract many labels in different systems but frequently coalesce around live issues, such as civic participation, online activism, the advent of so-called "fake news", online safety, self-curation, datafication and so on. These live issues are frequently addressed as interstitial concepts which fall between traditional subject silos and often they have no formal place in the curriculum at all. Where they do, they challenge traditional positioning and subjectivities of teachers and students alike. We are interested in

hearing about research which explores the ways in which social actors in education systems can engage with how meanings are made and circulated in the digital age and how they shape our experience of the world.

Feminist perspectives of edtech. In recent years, there has been a small, but increasing focus on the use of feminist theory to develop a critical engagement with the way in which gender, ethnicity, class, sexuality and disability interrelate in understanding of education and technology. There have been some excellent articles published in LMT and the #femedtech network is growing. However, there is a need for more research that applies a feminist lens in the ed tech field. Due to the common, typically instrumental characteristics of research around learning, media and technology, gender is often reduced simply to a 'neutral' variable in a model when trying to determine the educational impact or outcome. Such an approach ignores the continued problems with the ways that gender and other inequalities are encoded into the technologies we routinely use for learning and everyday life; and the power and representational imbalances in the ed tech industry more broadly. What are the implications of these inequalities? Whose experiences are most valued, best represented and validated? Who is excluded and why? What kinds of knowledge are prioritised and what is ignored?

Participant led / Participatory research / Multimodal methods. It is clear that what it means to be a participant in research into digital media and learning is complex and contested, but it is also clear that there are many exciting projects around attempting to work with social actors in educational settings as researchers of their own experience. At what point do participants have true agency in their contributions? To what extent are research subjects participant co-producers of research rather than designers of that work? We are interested in the kinds of methodologies which allow us to advance understanding of the place of learning in the wider context of digital cultures and lived experience. How do we, for example, employ multimodal methods of research and analysis to pay attention to the detail and complexity of lived experience of the digital in all its forms? What might this mean for education and learning in the next decade in the context of the huge issues outlined earlier in the editorial?

Digital Methodologies. As an increasing number of activities involve using technology, more 'digital traces' are created. These may include, for example, email trails, forum discussions, interactions on social media, hyperlinks between different sites, geo-location data etc. Researchers can collect and analyse such data, potentially making parts of the learning process and wider behaviours and processes relevant to education more visible than was possible previously. In related disciplines, such as Sociology, there has been much discussion of how these new approaches may change the shape and nature of the field (e.g. Savage and

Burrows, 2007) yet in Education, these questions (and the use of such data) have been largely left to learning scientists form the learning analytics and educational data mining communities, who have used data trails created in MOOCs for example, to try to develop primarily psychological insights about learning. This is a missed opportunity, as analysis of large scale digital trace data (e.g. via social network analysis, analysis of click-stream data, visualisation) could be used to help address an array of critical ed tech questions. For example, mapping networks of actors, analysing discourse across different digital ed tech communities, and capturing inequalities in the use of technology by individuals and by educational institutions (see e.g. Kimmons et al., 2018). In addition, the use of these methods enables further understanding and critique of what such methods can, and cannot offer by the LMT community. What are the premises of such methods? How and why do they 'work'? How can these techniques be described in ways that make them transparent and understandable to all LMT researchers? Can such methods be used for emancipatory and critical research? These are the kinds of questions we would encourage articles in LMT to tackle.

So here is our 'wish list' as editors. Contributions that aim to work toward one, or more, of the goals outlined above are very welcome in Learning, Media and Technology.

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